



Application for Hosting EACTA/ESA Cardiothoracic and Vascular Anaesthesia Fellowship Programme

Fellowship Information	Cardiothoracic and Vascular Anaesthesia Fellowship Programme – São Paulo - Brazil		
Institution Name	Dante Pazzanese Institute of Cardiology		
Address	Dante Pazzanese street 500 Sao Paulo - Brazil		
Website	www.idpc.org.br		
Chair Name	Antoninho Sanfins Arnoni	Email	antoninho.arnoni@dantepazzanese.org.br
Programme Director			
Name	Caetano Nigro Neto		
Board Certification(s)	Brazilian Society of Anaesthesiology		
Title/Affiliation	M.D.; P.h.D / Brazilian Society of Anaesthesiology		
Number of original publications	25		
EACTA, ESA, or other societies membership	EACTA MEMBER		
If yes, membership's number	100348		
Email	caenigro@uol.com.br		
Mailing Address			
Street	Peixoto Gomide street 502/ 173 B		
City	Sao Paulo	Region	
Country	Brazil	City/Zip code	01409-000
Phone	+5511983156024	Fax	
Will the Programme director devote sufficient time to provide substantial leadership to the programme and supervision for the fellows?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Will the Programme director review the fellows' clinical experience logs at least quarterly and verify completeness and accuracy?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Does the national/international regulatory authority(s) recognizes the institutional CTVA Fellowship Programme?			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If yes, please explain			
Completion of the programme will be acknowledged by the Department of Anaesthesia and Intensive Care at the host centre in junction with European Association of Cardiothoracic Anaesthesia (EACTA)			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Candidate's requirements

The candidates must be board certified or board eligible according to European residency programme standards Yes No

Language requirements: Portuguese level B2

Specific requirements towards the attending fellow:

Since the fellow will be involved with direct patient care, the candidates must be board certified or board eligible according to Brazilian or European residency programme standards, and must be proficient in Portuguese Proficiency Test – CELPE BRÁS (Intermediate Superior Level is required).

General Programme Information

Aims, goals and objectives of the Fellowship Programme

CTVA at Dante Pazzanese Institute of Cardiology (IDPC), Brazil, has been established with the aim of providing a solid clinical and academic experience in the perioperative management of adult and paediatric patients undergoing complex cardiovascular procedures.

Preferred Duration 12 months 24 months

* Of note, the training period should not be interrupted by frequent and/or prolonged periods of secondment to other divisions / departments.

Preferred Programme Training Start: Month
March Programme End: Month
February

Number of Positions Per Year 2 positions offered to EACTA

Type of fellowship training available:

- Clinical only
- Clinical / Basic Research
- Clinical / Clinical Research
- Basic Research only
- Clinical Research only

If clinical, will the fellows be allowed to work with the patients under supervision Yes No

Comments The trainee will have the opportunity for direct patients' care and will have constant supervision during his training.

Faculty*

CTV Anaesthesia Faculty-Research Interest and/or Clinical Expertise. * Please, list at least three names.

Name	EACTA member	Certification in Cardiothoracic and Vascular Anaesthesia	Additional Qualifications	Email	Contact Address
Marcelo Salgado	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	YES	Intraoperative TEE Anaesthesia Specialist / Cardiac Anaesthesia Consultant / PhD	mfonsecasalgado@hotmail.com	
Grete Oliveira Nicolau	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	YES	Cardiac Anaesthesia Consultant / Congenital Heart Diseases Anaesthesia Specialist	greteloliveira@gmail.com	
Marcos Rodrigues Furtado de Mendonça	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	YES	Intraoperative TEE Anaesthesia Specialist / Cardiac Anaesthesia Consultant	marcosm1@terra.com.br	
Francisco Jose Lucena Bezerra	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	YES	Cardiac Anaesthesia Consultant	Fjlb70@yaahho.com	
David Le Bihan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cardiologist / NBE / PhD	davidbihan@uol.com.br	
Rodrigo Bellio de Matos Barreto	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cardiologist / NBE / PhD	barretto.rodrigo@terra.com.br	
Renato Samfins Arnoni	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cardiac Surgeon / PhD	rarnoni@uol.com.br	
Click here to enter text.	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Click here to enter text.	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Click here to enter text.	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Click here to enter text.	<input type="checkbox"/> Yes <input type="checkbox"/> No				

Publications lists of the faculty's members in PubMed

- Landoni G, Lomivorotov V, Pisano A, Nigro Neto C, et al. Mortality in caRdIAc surgery (MYRIAD): A randomized controlled trial of volatile anesthetics. Rationale and design. *Contemp Clin Trials*. 2017;59:38-43
- Nigro Neto C, Landoni G, Tardelli MA. A Novel Anti-Pollution Filter for Volatile Agents During Cardiopulmonary Bypass: Preliminary Tests. *J Cardiothorac Vasc Anesth*. 2017;31(4):1218-1222.
- Landoni G, Pisano A, Lomivorotov V, Alvaro G, Hajjar L, Paternoster G, Nigro Neto C, et al. Randomized Evidence for Reduction of Perioperative Mortality: An Updated Consensus Process. *J Cardiothorac Vasc Anesth*. 2017;31(2):719-730.
- Nigro Neto C, De Simone F, Cassara L, Dos Santos Silva CG, Maranhão Cardoso TA, Carco F, Zangrillo A, Landoni G. Tricks, tips, and literature review on the adapted vaporize system to deliver volatile agents during cardiopulmonary bypass. *Ann Card Anaesth*. 2016;19(2):240-4.
- Azevedo Maranhão Cardoso TA, Nigro Neto C, Santos Silva CG, et al. Use of lyophilized fibrinogen concentrate in cardiac surgery: a systematic review. *Heart Lung Vessel*. 2015;7(1):47-53.
- Bove T, Matteazzi A, Belletti A, Paternoster G, Saleh O, Taddeo D, Dossi R, Greco T, Bradic N, Husedzinovic I, Nigro Neto C, et al. Beneficial impact of levosimendan in critically ill patients with or at risk for acute renal failure: a meta-analysis of randomized clinical trials. *Heart Lung Vessel*. 2015;7(1):35-46.
- Nigro Neto C, Costa E, Rossi R, Tardelli MA. Inhalation induction with sevoflurane in adult cardiac surgery patients. A case series. *Heart Lung Vessel*. 2014;6(1):8-12.
- Nigro Neto C, do Amaral JL, Arnoni R, Tardelli MA, Landoni G. Intrathecal sufentanil for coronary artery bypass grafting. *Braz J Anesthesiol*. 2014;64(2):73-8.
- Arnoni RT, Dantas DC, Arnoni A, Nigro Neto C, Abdulmassih Neto C. Assessment of sternal closure using titanium plate. *Rev Bras Cir Cardiovasc*. 2013;28(3):386-90.
- Nigro Neto C, Landoni G, Cassara L, De Simone F, Zangrillo A, Tardelli MA. Use of volatile anesthetics during cardiopulmonary bypass: a systematic review of adverse events. *J Cardiothorac Vasc Anesth*. 2014;28(1):84-89.
- Barile L, Landoni G, Pieri M, Ruggeri L, Maj G, Nigro Neto C, et al. Cardiac index assessment by the pressure recording analytic method in critically ill unstable patients after cardiac surgery. *J Cardiothorac Vasc Anesth*. 2013;27(6):1108-13.
- Landoni G, Greco T, Biondi-Zoccai G, Nigro Neto C, et al. Anaesthetic drugs and survival: a Bayesian network meta-analysis of randomized trials in cardiac surgery. *Br J Anaesth*. 2013;111(6):886-96.
- Nigro Neto C, Arnoni R, Rida BS, Landoni G, Tardelli MA. Randomized trial on the effect of sevoflurane on polypropylene membrane oxygenator performance. *J Cardiothorac Vasc Anesth*. 2013;27(5):903-7.
- Nigro Neto C, Tardelli MA, Paulista PH. Use of volatile anesthetics in extracorporeal circulation. *Rev Bras Anesthesiol*. 2012;62(3):346-55.
- Nigro Neto C, Iza MP, Tardelli MA. Paraplegia after myocardial revascularization. Case report. *Rev Bras Anesthesiol*. 2010;60(2):198-206, 114-8.
- Pasind, C, et al. Nigro Neto CN, et al. Dexmedetomidine as a sedative agent in critically ill patients: a meta-analysis of randomized controlled trials. *PLoS One*. 2013;8(12):e82943



Resources

Check if each of the following is available at the host centre.

Resource	Yes	Number	Working days/week
Total cardiothoracic and vascular ward beds		450	7
Number of ICU beds dedicated to CTV patients		91	7
Is there an emergency department in which cardiothoracic patients are managed 24 hours a day?	<input checked="" type="checkbox"/>	1	7
An adequately designed and equipped post-anaesthesia care unit for cardiothoracic patients located near the operating room suite?	<input checked="" type="checkbox"/>	5	7
Is there monitoring and advanced life support equipment representative of current levels of technology?	<input checked="" type="checkbox"/>	20	7
Hybrid Operating Rooms	<input checked="" type="checkbox"/>	1	5
Cardiac Operating Rooms	<input checked="" type="checkbox"/>	8	5
Thoracic Operating Rooms	<input checked="" type="checkbox"/>	1	1
Vascular Operating Rooms	<input checked="" type="checkbox"/>	1	5
Catheterisation Labs	<input checked="" type="checkbox"/>	8	5
Electrophysiology Labs	<input checked="" type="checkbox"/>	1	5
Pulmonology Labs	<input checked="" type="checkbox"/>	1	5
Interventional Vascular Suits	<input checked="" type="checkbox"/>	2	5
Separate CVICU Facility	<input checked="" type="checkbox"/>	4	7
Animal Laboratory for research purposes	<input checked="" type="checkbox"/>	1	5
Outpatient Clinic for perioperative evaluation of patients undergoing cardiothoracic and vascular procedures	<input checked="" type="checkbox"/>	7	5
24-hours acute pain service available for patients undergoing cardiac, thoracic and vascular procedures	<input checked="" type="checkbox"/>	1	7
Meeting Rooms	<input checked="" type="checkbox"/>	5	5
Classrooms with visual and other educational aids	<input checked="" type="checkbox"/>	5	5
Study areas for fellows	<input checked="" type="checkbox"/>	1	6
Office space for faculty members and fellows	<input checked="" type="checkbox"/>	1	7
Diagnostic facilities	<input checked="" type="checkbox"/>	4	7
Therapeutic facilities	<input checked="" type="checkbox"/>	5	7
24-hour laboratory services available in the hospital	<input checked="" type="checkbox"/>	1	7
Cardiac stress testing	<input checked="" type="checkbox"/>	1	5
Cardiopulmonary scanning procedures	<input checked="" type="checkbox"/>	1	6
Pulmonary function testing	<input checked="" type="checkbox"/>	1	5
Computers and IT support	<input checked="" type="checkbox"/>	5	7
Appropriate on-call facilities for men and women	<input checked="" type="checkbox"/>	14	7

Clinical Skills and Responsibilities

Will your Programme offer a 12-24 months of fellowship education in fundamental clinical skills of medicine relevant to the practice of CTVA? Yes No

If yes, for each rotation or experience below, specify the duration (in months, four weeks = one month) during the 12-24 months of education in fundamental clinical skills.

Caring for inpatients in:

Number of performed produces/year

Cardiac Surgery using CPB	1800
Cardiac Surgery without CPB	100
Minimally-Invasive Cardiac Procedures	100
Interventional Cardiac Catheterization (e.g. TAVI, Mitraclip, ASD..)	80
Electrophysiology Lab (e.g. mapping, ablation, pacemakers, ICDs..)	800



Robotic Cardiac Surgery	0
Heart, Lung, and Heart/Lung Transplants	40
ECLS, ECMO, VAD Procedures	10
Echocardiography Lab	50
Thoracoscopic Surgery	30
Pulmonary Resection	10
Oesophageal Surgery	5
Tracheo-Bronchial Surgery	20
Interventional Pulmonology Procedures	20
Major Vascular Procedures	150
Neurological monitoring during major vascular surgery	80
Interventional Vascular Procedures	120
Acute and Chronic Pain Management for CTVA patients	100
Basic Research	40
Clinical Research	20

Rotations in:

Number of performed procedures/year/fellow

Cardiac Anaesthesia	300
Thoracic Anaesthesia	50
Anaesthesia for Major supra-inguinal Vascular Procedures	60
Trans-oesophageal and trans-thoracic echocardiography	120
Medical or surgical Critical Care Rotation	100 per fellow per two months per year
Inpatient or outpatient cardiology	250
Inpatient or outpatient pulmonary medicine	20
Extracorporeal perfusion technology (CPB, ECMO, Nova-Lung.)	80
Paediatric cardiothoracic anaesthesia	150
Basic Research	10
Clinical Research	5

Will all fellows entering the CTVA Programme complete each of the fundamental clinical skills of requirements? Yes No

If no, explain.

In the clinical anaesthesia setting, including nights and weekends, will faculty members at any time direct perioperative CTVA care, involving fellows, for more than two anaesthetizing locations simultaneously?

Yes No

If Yes, describe:

Clinical Responsibility:

List any other rotations (along with their duration, in months) offered in the Programme to augment fellows' learning.

Click here to enter text.

Will advanced subspecialty rotations reflect increased responsibility and learning opportunities?

Yes No

Maximum Time in Non-Clinical Activities

Financial Statement

An employment contract will be signed with the candidate

Yes No

Accommodation options are provided

Yes No



Transportation/travel options are provided

 Yes No

Monthly Salary:

Amount

R\$ 10.000,00

Currency

Brazilian Reais

This opportunity is not funded by the centre

 Yes No

Source of financial support for the candidate:

- Host centre (monthly salary)
 Candidate 's centre
 Scholarship
 Educational grant
 Award
 Candidate's own expenses
 Others

Please, describe

CASP – Clinica de Anestesia São Paulo

Educational and Academic Programme**Didactic Sessions**

Will faculty members' attendance be monitored?

 Yes No

Will fellows' attendance be monitored?

 Yes No

Will attendance be mandatory for faculty members?

 Yes No

Will attendance be mandatory for fellows?

 Yes No

Who of the following will provide content at conferences? Check all that apply.

Anaesthesiology faculty members from this department	<input checked="" type="checkbox"/>
Anaesthesiology faculty members from other sites	<input checked="" type="checkbox"/>
Non-anaesthesiologists from the primary clinical site	<input checked="" type="checkbox"/>
Non-anaesthesiologists from the participating sites	<input checked="" type="checkbox"/>
Visiting faculty members	<input checked="" type="checkbox"/>
Drug/industry representatives	<input checked="" type="checkbox"/>
Fellows	<input checked="" type="checkbox"/>
Others (specify):	<input type="checkbox"/>
Others (specify): Click here to enter text.	<input type="checkbox"/>

What will be the frequency of the following educational topics in the programme's schedule?

	Weekly	Bi-weekly	Monthly	Quarterly	Semi-annually	Annually
Critical care appraisal of the literature (i.e., journal club)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality improvement (M&M, QA)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Board review (e.g., oral exams, keywords)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Grand rounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) Echocardiography Theoretical Course	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) CTVA Theoretical Course	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Formal Course Work Available in:

Extra-Institutional Educational Conference Support:

In the Previous 5 Years, Fellows were 1st or 2nd Author On:

Abstracts

20

Peer-Reviewed Journal Articles

14

Book Chapters

3

Other Publications

4

Dedicated Research Time:

10 hours weekly

Patient Care

Competency Area	Settings/Activities	Assessment Method(s)
Following standards for patient care and established guidelines and procedures for patient safety, error reduction, and improved patient outcomes.	Pre-anaesthetic visit / Local Protocols	Evaluation of Perioperative Quality Indicators / Perioperative Check List / protocols review and discussion
Pre-operative patient evaluation and optimization of clinical status prior to the cardiothoracic procedure.	Pre anaesthetic visit	Pre-anaesthetic visit under supervision and discussion
Interpretation of cardiovascular and pulmonary diagnostic test data.	Pre-anaesthetic visit	Pre-anaesthetic visit under supervision and discussion
Hemodynamic and respiratory monitoring.	ICU Rotation / OR cardiac surgeries rotations	ICU rounds / Perioperative monitoring protocols review and discussion
Pharmacological and mechanical hemodynamic support.	ICU Rotation / OR cardiac surgeries rotations	ICU rounds / Perioperative pharmacological and hemodynamic protocols review



Competency Area	Settings/Activities	Assessment Method(s)
Peri-operative critical care, including ventilatory support and peri-operative pain management.	ICU Rotation / OR cardiac surgeries rotations	ICU rounds / Perioperative protocols review and discussion
Providing anaesthesia care for patients undergoing cardiac surgery with and without extracorporeal circulation.	OR cardiac surgeries rotations	OR cardiac surgeries rotations under supervision and daily discussion of scheduled clinical cases
Providing anaesthesia care for patients undergoing thoracic surgery, including operations on the lung, oesophagus, and thoracic aorta.	OR cardiac surgeries rotations	OR thoracic surgeries rotations under supervision and daily discussion of scheduled clinical cases
Advanced-level peri-operative TEE.	Perioperative Echocardiography with Simulation Practice / OR TEE rotation	Simulation and OR cardiac surgeries with TEE monitoring under supervision and TEE discussion of the tests results
The ability to independently manage intra-aortic balloon counterpulsation and be actively involved in the management of other extracorporeal circulatory assist devices.	ICU and OR cardiac surgeries rotations	OR cardiac surgeries rotation under supervision and daily discussion of scheduled clinical cases / ICU rounds
Management of cardiopulmonary bypass (CPB).	OR CPB section rotation	OR CPB management rotation under supervision and daily discussion of scheduled clinical cases

Medical Knowledge

Indicate the activity(ies) (lectures, conferences, journal clubs, clinical teaching rounds, etc.) in which residents will demonstrate knowledge in each of the following areas. Also indicate the method(s) used to assess competence.

Area of Knowledge	Settings/Activities	Assessment Method(s)
How cardiothoracic diseases affect the administration of anaesthesia and life support to adult cardiothoracic patients.	OR Anaesthesia for Cardiac Surgery Rotations , CTVA Theoretical Course, lectures, conferences	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Embryological development of the cardiothoracic structures.	OR Congenital Heart Diseases rotation, CTVA Theoretical Course, lectures, conferences, OR clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Congenital Heart Diseases Surgery Rotation
Pathophysiology, pharmacology, and clinical management of patients with cardiac disease, to include cardiomyopathy, heart failure, cardiac tamponade, ischemic heart disease, acquired and congenital valvular heart disease, congenital heart disease, electrophysiologic disturbances, and neoplastic and infectious cardiac diseases.	OR Anaesthesia for Cardiac Surgery Rotations, CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations
Pathophysiology, pharmacology, and clinical management of patients with respiratory disease, to include pleural, bronchopulmonary, neoplastic, infectious, and inflammatory diseases.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Pathophysiology, pharmacology, and clinical management of patients with thoracic vascular, tracheal, oesophageal, and mediastinal diseases, to include infectious, neoplastic, and inflammatory processes.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Non-invasive cardiovascular evaluation, to include electrocardiography, transthoracic echocardiography, TEE, stress testing, and cardiovascular imaging.	Non-invasive Diagnosis in Cardiology Department / Theoretical Course of Perioperative Echocardiography in the TEE Simulation Lab	Echocardiography Theoretical Course exam / Fellow evaluation during OR's TEE rotation
Cardiac catheterization procedures and diagnostic interpretation, to include invasive cardiac catheterization procedures, including angioplasty, stenting, and transcatheter laser and mechanical ablations.	Interventional Cardiology Department Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Non-invasive pulmonary evaluation, to include pulmonary function tests, blood gas and acid-base analysis, oximetry, capnography, and pulmonary imaging.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Pre-anaesthetic evaluation and preparation of adult cardiothoracic patients.	CTVA Theoretical Course, Pre anaesthetic visit teaching rounds	CTVA Theoretical Course exam
Peri-anaesthetic monitoring, both non-invasive and invasive (intra-arterial, central venous, pulmonary artery, mixed venous saturation, cardiac output)	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Pharmacokinetics and pharmacodynamics of medications prescribed for medical management of adult cardiothoracic patients.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Pharmacokinetics and pharmacodynamics of anaesthetic medications prescribed for cardiothoracic patients.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief



Area of Knowledge	Settings/Activities	Assessment Method(s)
Pharmacokinetics and pharmacodynamics of medications prescribed for management of haemodynamic instability.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Extracorporeal circulation, to include: myocardial preservation; effects of CPB on pharmacokinetics and pharmacodynamics; cardiothoracic, respiratory, neurological, metabolic, endocrine, haematological, renal, and thermoregulatory effects of CPB; and coagulation/ anticoagulation before, during, and after CPB.	OR CPB Rotation / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's CPB Section Rotation
Inotropes, chronotropes, vasoconstrictors, and vasodilators.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Circulatory assist devices, to include intra-aortic balloon pumps, left and right ventricular assist devices, and extracorporeal membrane oxygenation (ECMO).	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, ICU Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Pacemaker insertion and modes of action.	OR Anaesthesia for EP Rotation / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Electrophysiology (EP) Rotation
Cardiac surgical procedures, to include: minimally invasive myocardial revascularization; valve repair and replacement; pericardial, neoplastic procedures; and heart and lung transplantation.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Thoracic aortic surgery, to include: ascending, transverse, and descending aortic surgery with circulatory arrest; CPB employing low flow and or retrograde perfusion; lumbar drain indications and management; and spinal cord protection, including cerebral spinal fluid (CSF) drainage.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Cardiac Surgery Rotations / Intraday Debrief
Oesophageal surgery, to include varices, neoplastic, colon interposition, foreign body, stricture, and tracheoesophageal fistula.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds / Medical School Hospital of Sao Jose do Rio Preto	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Thoracic Surgery Rotations / Intraday Debrief
Pulmonary surgery, to include segmentectomy (open or video-assisted), thoracoscopic or open, lung reduction, bronchopulmonary lavage, one-lung ventilation, lobectomy, pneumonectomy and bronchoscopy, including endoscopic, fiberoptic, rigid, laser resection.	OR Anaesthesia for Cardiac Surgery Rotations / CTVA Theoretical Course, lectures, conferences, OR Clinical teaching rounds / Medical School Hospital of Sao Jose do Rio Preto	CTVA Theoretical Course exam / Fellow evaluation during OR's Anaesthesia for Thoracic Surgery Rotations / Intraday Debrief
Post-anaesthetic critical care of adult cardiothoracic surgical patients.	ICU Clinical Teaching rounds / CTVA Theoretical Course	CTVA Theoretical Course exam / Fellow evaluation during ICU Rotation
Peri-operative ventilator management, to include intra-operative anaesthetics, and critical care unit ventilators and techniques.	ICU Clinical Teaching rounds / CTVA Theoretical Course	CTVA Theoretical Course exam / Fellow evaluation during ICU Rotation
Pain management of adult cardiothoracic surgical patients.	ICU Clinical Teaching rounds / CTVA Theoretical Course	CTVA Theoretical Course exam / Fellow evaluation during ICU Rotation
Research methodology/ statistical analysis, the fundamentals of research design and conduct, and the interpretation and presentation of data.	Statistics and Methodological Research Course	Fellow participation in local RCTs, Multicentre Studies, Papers Publications and Abstracts Submissions to Anaesthesia Meetings
Quality assurance/ improvement.	Hospital Quality Sector	Evaluation of Perioperative Quality Indicators
Ethical and legal issues, and practice management.	Local Ethical Committee	Pre-anaesthetic Evaluation Form, Anaesthesia Record, Anaesthesia Informed Consent

Evaluation of Trainees

1. The Programme Director will give an appraisal for each fellow every 6 months. Yes No
2. The faculty and trainee should agree a joint evaluation both fellow's progress and the training programme, and devise a plan for addressing any perceived difficulties or deficiencies. Yes No
3. Training programmes should encourage fellows to provide a written confidential evaluation of the programme. Yes No
4. The centre will be able to maintain a register of those fellows who have entered and successfully completed a training programme in order to continue its accreditation as a training centre. Yes No
5. At the end of the training period, the centre would acknowledge in writing successful completion of a fellow training. Yes No

Practice-based Learning and Improvement

1. Briefly describe one planned learning activity in which fellows engage to: identify strengths, deficiencies, and limits in their knowledge and expertise (self-reflection and self-assessment); set learning and improvement goals; and identify and perform appropriate learning activities to achieve self-identified goals (life-long learning).

During Cardiac Anaesthesia Exposure, fellows are encouraged to practice evidence-based medicine and be able to utilize resources to optimize patient care and personal growth development. Fellows are trained to assume progressive responsibility in the perioperative anaesthetic management of adult patients undergoing major cardiovascular surgery. As one of example of



practice-based learning and improvement, upon choosing Swan-Ganz catheter insertion in a patient before surgery the fellow will have a class in "Swan-Ganz catheter indications and insertion access" where he will learn the main aspects of the subject, followed by training in a simulation scenario and then take that knowledge to the patient in the OR. A checklist sheet will evaluate aspects such as asepsis, antiseptics, table set-up and the use of ultrasound machine. A video will be played before the procedure so the fellow will have the chance to review the main aspects of it. He will be supervised and after the placement of the catheter the checklist sheet will be discussed with him to identify aspects that could be improved and aspects he did well. A discussion will also encourage the fellow to search the best evidence available online in order to further enrich his learning experience.

2. Briefly describe one planned quality improvement activity or project that will allow the fellows to demonstrate an ability to analyse, improve and change practice or patient care. Describe planning, implementation, evaluation and provisions of faculty support and supervision that will guide this process.

Fellows must demonstrate the ability to recognize and improve upon limitations in one's knowledge and clinical skills. Fellows will be motivated to search for scenarios that need to change or to be improved during their daily practice under supervision of a senior staff during the entire process. One example is the evaluation of Perioperative Anaesthesia Quality Indicators data that might show possible recurring mistakes that need to be corrected. The fellow will be encouraged to participate in the critical analysis process of the results for posterior discussion in the Quality Improvement Review Meetings for possible change and implementation.

3. Briefly describe how fellows will receive and incorporate formative evaluation feedback into daily practice.

During routinely procedures under supervision, fellows come across difficult situations frequently. They will be stimulated to take decisions, argued how to solve patient's health problems with the best practice-evidence for any clinical case through real time verbal feedback and the intraday debrief at the end of the day.

4. Briefly describe one example of a learning activity in which fellows engage to develop the skills needed to use information technology to locate, appraise, and assimilate evidence from scientific studies and apply it to their patients' health problems. The description should include:

Fellows are invited to participate in clinical trials, multicentre studies, helping on writing papers under supervision with discussion with the faculty research members that will help improve knowledge for later practical application.

5. Briefly describe how fellows will participate in the education of patients, families, students, fellows, and other health professionals.

Fellows are motivated to participate in multidisciplinary committee or groups that include fellows from other areas and local humanization groups that involves health professionals, patients and families. The local hospital humanization committee and support group offer all these events routinely.

Interpersonal and Communication Skills

1. Briefly describe one learning activity in which fellows demonstrate competence in communicating effectively with patients and families across a broad range of socioeconomic and cultural backgrounds, and with physicians, other health professionals, and health-related agencies.

During the pre-anaesthetic visit, the fellows are oriented to inform patients and family the best way possible, of all the risks that patient will be submitted and the alternative treatments that may occur as a result of adverse events. The fellow will also be oriented to use the language that will be adapted according to the patient's social level and cultural backgrounds. The patient or family will be encouraged to repeat back with their own words their understanding of the situation that was discussed.

2. Briefly describe one learning activity in which fellows demonstrate their skills and habits to work effectively as members or leaders of a health care team or other professional group. In the example, identify the members of the team, responsibilities of the team members, and how team members communicate to accomplish responsibilities.

Fellows are informed that the best practices before any procedure recommends using a checklist. For example, the so-called "central line bundle" of best practices recommends using a checklist when inserting a central venous catheter. If the fellow is observing a resident placing a central line catheter, he will be encouraged to communicate when elements of the bundle are not executed (for example, a breach in sterility has occurred).

3. Briefly describe how fellows will be provided with opportunities to act in a consultative role to other physicians and health professionals related to clinical information systems.

Fellows will have the opportunity to communicate with other physicians in a consultative role when required to assess epidural catheters for postoperative analgesia, for helping monitoring lumbar pressure, for difficult airway assessment, for sedation in the image lab, for sedation and helping other physicians in different situations in the ER or in the ICU (ex, peripheral venous access, post punctural headache).

4. Briefly describe how fellows will be provided with opportunities to maintain comprehensive, timely, and legible medical records, if applicable.

During the first OR visits the fellow will be oriented how to thoroughly fill out our Anaesthesia Record in a timely and legible fashion.

5. Briefly describe how fellows will maintain a comprehensive anaesthesia record for each patient, including evidence of pre- and post-operative anaesthesia assessment, an ongoing reflection of the drugs administered, the monitoring employed, the techniques used, the physiologic variations observed, the therapy provided as required, and the fluids administered.

Fellows are required to fill as complete as possible the anaesthesia record during any surgical procedure and maintain an accurate procedure logbook. This includes the main points of the Pre-Anaesthetic Evaluation Form and the Anaesthesia Record. Every procedure with anaesthesia is also included in the hospital anaesthesia database, which the fellow has open access to review.

6. Briefly describe how fellows will create and sustain a therapeutic relationship with patients, engage in active listening, provide information using appropriate language, ask clear questions, provide an opportunity for



comments and questions, and demonstrate sensitivity and responsiveness to cultural differences, including awareness of their own and their patients' cultural perspectives.

During pre-anaesthetic visit, fellows have to demonstrate sensitivity and responsiveness to patients' cultural differences. Jehovah's witness patients are examples that fellows have to effective and appropriate listening to reach the best agreement between the parties about blood components transfusions. This will help to create and sustain a specific therapeutic and a properly conduct to be followed during surgery.

Professionalism

Briefly describe the learning activity(ies), other than lecture, by which fellows demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles, including: compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; respect for patient privacy and autonomy; accountability to patients, society, and the profession; and sensitivity and responsiveness to a diverse patient population, including to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

Fellows are encouraged to apply ethical decision making in all aspects of professional practice pertaining to the provision or withholding of clinical care, confidentiality of patient information, informed consent and medical practice. Fellows are motivated to seek internal assessment, and apply external critical observation of professional performance during the pre and post anaesthetic visit or in any form of interaction with the patient or with his/her family.

Systems-based Practice

1. Describe the learning activity(ies) through which fellows achieve competence in the elements of systems-based practice: working effectively in various health care delivery settings and systems, coordinating patient care within the health care system; incorporating considerations of cost-containment and risk-benefit analysis in patient care; advocating for quality patient care and optimal patient care systems; and working in inter-professional teams to enhance patient safety and care quality.

Fellows will participate in grand rounds to familiarize them with the overall anaesthesia economic climate. They will also be encouraged to search our hospital intranet or pharmaceutical staff in order to get information focused specifically on drug costs. One example is the necessity of a specific drug to treat a perioperative complication, such as acute bleeding: first fellow will be faced with the question if the drug is well indicated for the case during discussion with the team (staff and surgeon regarding the use of PCC, etc.). Second, the fellow has to get information on how he can find the drug in the system (in this case the local pharmacy). Third, how much the drug costs and compares it with other possible treatments (like, fresh frozen plasma). During this whole process, the fellow will assess if the use of the drug on the risk-benefit analysis will bring a better quality of care for the patient.

2. Describe an activity that fulfils the requirement for experiential learning in identifying system errors and implementing potential systems solutions.

During the M&M sessions the fellows will have the opportunity to review challenging cases and to discuss with staff members, other fellows and physicians to identify errors and to present solutions that may change their practice and ultimately improve patient care quality.

EACTA/ESA Biennial Reviewers 'Visit (for 2-days)

Dates proposed for the visit (at least 3) **AUGUST** or **MAY** or

I hereby accept the regulations of the Hospital Visiting especially to take in charge the travel costs and the hotel accommodation of the 2 reviewers on the most reasonable base. Yes No

Other Comments:

To be completed by the Head of department or the authorised deputy.

Please fill in all required fields and send to eacta@mci-group.com

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